Continental

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Flight Standards
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Federal Registry
Department of Transportation
Federal Aviation Administration
1 CFR Parts 1, 20, 61, 142, 142
{Docket Number FAA-2002-012461
Flight simulation Device Initial and Continuing Qualification and Use; Proposed Rule.

Attached, please find the comments of Continental Airlines to the FAA Notice of Proposed Rule Making (NPRM) as referenced above.

Continental Airlines has submitted a letter of support for the response by the Air Transport Association (ATA) Simulator Technical Issues Group (STIG). Additionally, we would also like to make the following additional comments on areas of particular concern:

- An incorrect assumption is made in the NPRM that personnel are already on staff to perform all of the "watchdog" and reporting tasks required by new Part 60. These differences results in a significantly larger financial burden associated with Part 60 implementation. (Attached to this letter is a summary of additional costs incurred primarily in setting up and administering Part 60 requirements.)

- Continental Airlines has a much higher usage of the flight training devices (FSD's) than the assumed average. Usage at Continental is up to 200% higher than considered in the annual burden estimate of the NPRM. Continental trains 360 days a year, 7 days a week on 20 FSD's.

- Continental Airlines has estimated that an additional cost of $222,340 for the first year and $152,340 annually thereafter will be required to meet the requirements of the NPRM. Not included in these estimates: 1) a cost of $280,000 for the requirement to provide all Qualification Test Guides (QTG's) in electronic format within 6 years, regardless of the original qualification standard, for all FSD's. 2) exposure to possible additional costs to implement aircraft related modifications that have no impact on performance or training issues. Estimated at $23,000 per modification per device.

- The Rule portion of Part 60 address a significant number of technical issues that would be best delegated to the Qualification Performance Standard (QPS). Also, we have found that parts of the Rule and its application are defined differently in the rule than in the QPS. Therefore, how the specific language would be enforced by other FAA personnel and inspectors is unknown and could be in conflict with intent of the QPS.

- Harmonization and previous efforts to set international standards for simulator qualification standards in conjunction with the FAA appears to have been disregarded. This will put the airlines back to having a different approval standard than that used by the majority of foreign carriers. It will also impose financial burden on the carriers when required to sponsor or use FSD's that are currently tested or approved under the ICAO standard.

- Part 60 language concerning modifications and associated record keeping is extremely vague and difficult to understand. Taken literally, every change to FSD software or hardware would require prior approval of the National Simulator Program (NSP).

- The requirement to get NSP approval prior to putting a FSD back into service following any work that makes the device "unusable" has the potential to place severe restrictions on the airline's ability to schedule and use the device for training. It would also mandate that the NSP personnel be available 24/7 to provide this approval in a timely manner.

- The Table of minimum FSD requirements imply that all flight deck equipment operate and replicate the aircraft, and that hardware / operation be modified as the aircraft cockpit configuration changes. Many airlines fly variants of an aircraft model, making this difficult to define. This requirement also fails to acknowledge specific issues. First, is the approval of the Training Program Approval Authority (TPAA). This task should be specific to the POI and or the office of AFS 230 because any type of training is specific to a curriculum and a device type. Some system training is approved to be off-loaded from the FSD's to part task trainers (or other media) at a much lesser cost than making all cockpit installed devices fully functional. Second, it fails to acknowledge that all series identical aircraft are not always modified by the airline at the same time or rate or even with the same equipment. What percentage of the fleet being modified determines when a configuration change needs to be included in the FSD is not addressed.

- The stated NSP intent during the development of Part 60 was to capture current practices in rule form and to conform to internationally agreed upon standards and methodologies. However, some of the QPS requirements are totally new, highly restrictive, or in opposition to the stated intent, often without enough direction to determine what is required to meet the requirements of the QPS.

Questions concerning Continental Airlines' input should be addressed to:

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Attachment (1)

CONTINENTAL AIRLINES ESTIMATED COST OF PART 60

The requirement for a QA Management Representative will require a full time person. Since current manpower is not, as the FAA stated, already on staff, the cost will exceed $70,000 a year just to generate and fill this position — $70,000/annually

Developing the QA program will take 6 man months (involving a large number of personnel needed to provide information, review, and approval of QA program Estimated cost 1/2 man year at $70,000 a year. — $35,000/one time

Modifying the electronic storage record keeping developed by Continental to be compatible with the QA program will take 1/2 man year. — $35,000/one time

The NPRM's estimate of annual cost associated with Part 60 requirements for logging all discrepancy reports (DR's)and posting variance of this report, figures to be $518 per device. With 20 devices and using this figure, Continental's cost would be $10,360. The basis for the NPRM estimate is only for 2 DR's a week. Our average is more accurately 8 DR's a week, due to the maximum training loads we experience. A more realistic cost would be 4 times the NPRM's estimated cost. — $41,440/annually

Major modifications, especially on a newer fleets far exceed the stated average.(requiring 16 hours to implement and adding 2 hours of research with an average of 3 per year on 40% of devices). The FAA numbers appear adequate on older established fleet types. On the newer fleet types, a more accurate number is closer to 40 hours per change and an average of one a month for Continental's 11 new devices. Paperwork and process' required for the new rule adds approximately 8 hours per major modification.

Estimated average cost for major modifications
40 + 8 hrs X 12 modifications per year =576 Man hrs @ $40 hr
equals $23040 per device times 11 devices = $253,440

Of this cost a minimum of 8 man hours per modification is generated by Part 60 in administration, notification, and NSPM approval.

8 X 12 =96 @ $40 hr =$3,840 times 11 devices =42,240 — $42,240/annually

Note: The above is based on those modifications that are required in order to meet new data, improve performance, etc. If Part 60 taken literally, and it is FAA mandated that we incorporate every aircraft modification regardless of impact on training requirements or improvement of performance, the effective cost could increase by the base figure of $23,040 per 'non-productive' change.

The requirement to have previously approved QTG's on an electronic medium in 6 years generates a cost that can only be estimated. With 9 older devices that are not currently compatible with current state of the art data processes and have older medium flight test data (paper copies only with no data in an electronic format), the cost, based updating 2 devices per year (1 man year @ 70,000 for 4 years) is $280,000) This does not include any additional computational hardware/software that may have to be added to older devices in order to generate data necessary to perform this task. — $280,000

Cost Estimates.

	Initial / Year 1	Annually
Non-recurring costs	35,000	
	35,000	
Recurring costs	70,000	70,000
	40,140	40,140
	42,200	42,200
Totals	$222,340 *	$152,340 **

* This equated to approx. average of 10,000 per device for the first year.
** This equated to approx. average of 7,000 per device per year.
This is just to establish and administer the program. Below is the exposure for long term cost for additional expense based on Rule language.

Additional long term cost (est. for electronic media)	$280,000
Additional cost due to mandated non-performance related Modifications. (see note 1 above)	$23,000/per mod